

Atlantic Richfield Company

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December 6, 2010

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Jere Johnson
Remedial Project Manager
U.S. Environmental Protection Agency Region 9
75 Hawthorne Street, SFD-9-1
San Francisco, CA 94105

Subject: November 2010 Monthly Report, Yerington Mine Site, Lyon County, Nevada: Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), EPA Docket No. 9-2007-0005; Administrative Order on Consent, EPA Docket No. 09-2009-0010

Dear Ms. Johnson:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared the following monthly report for RI/FS and removal action activities at the Yerington Mine Site (Site) during November 2010.

November 2010 Activities

Site Security and O&M Activities

- Continued routine Site O&M, security and bird deterrent activities including operation of the propane cannons for the Arimetco ponds (with the exception of the VLT Pond, as directed by EPA). Bird guard towers were re-activated due to precipitation during the month at the pumpback well system (PWS) evaporation pond. The “wind dancer” bird deterrent operated for the first half of the month until the wind sock was damaged and taken out of service. New wind dancer replacement socks have been ordered. USFWS personnel conducted Site visits and reviewed the bird mitigation activities on November 2, 3, 9, 10, 11, 12 and 17.
- Continued monitoring of the evaporation pan located near PW6. PWS evaporation pond levels: North Cell 0.0 feet; Middle Cell = 0.0 feet; South Cell 0.0 feet (limited occurrences of ponded meteoric water insufficient to measure).
- Arimetco heap leach fluid management system (FMS): Pond levels: Phase 1 Pond = 2.5 feet; FMS Evaporation Pond = 7.25 feet; VLT Pond = 1.75 feet; Slot 2 Pond = 9.75 feet. Approximately 360,000 gallons of solution were transferred from the VLT Sediment Pond (VLTSP) to the FMS Evaporation Pond; no solution was transferred from the Slot Sediment Pond (SSP) or from the Phase 1 Pond to the FMS Evaporation Pond. FMS monitoring data was downloaded and tabulated (see attached PDF).
- Approximately 96,736 gallons of solution was pumped from the leak detectors in November. This value confirmed observations made in October that the pond liner had been damaged and was leaking at a greater rate than previously observed. Fluid levels were lowered below the suspected leak, and leak detector pumping immediately returned to previously observed minimal rates. ARC, EPA and NDEP personnel inspected the liner to confirm this condition. Pond levels will remain at this level until the pond liner can be cleaned, further inspected and repaired.

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November 2010 Activities - Continued

Site Security and O&M Activities -Continued

- Instituted a Site-wide worker and visitors pass system. All vehicles must now display a placard on the dash of their vehicle indicating their status as Site worker, contractor or visitor. At least during the removal action, a full-time gate attendant will monitor incoming and outgoing traffic.
- Continued preliminary planning to evaluate the re-location of ARC contractor facilities that support Site O&M and RI activities to a location north of Burch Drive.

Site Characterization

- Site-wide monthly groundwater elevation measurements were obtained from November 29 through December 1.
- A pit lake water elevation of 4222.162 feet amsl was recorded on November 12, 2010 from the pressure transducer, an increase of 0.159 feet since October 29, 2010. The pit lake elevation has risen 3.164 feet since November 12 of 2009. The transducer stopped working on November 12, and ARC is in the process of obtaining a replacement.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation.
- Submitted responses to EPA comments on the Baseline Human Health Risk Assessment for the Inhalation Pathway on November 15, and requested a follow-up discussion with EPA.
- Submitted responses to EPA comments on the Conceptual Site Model (CSM) for the Yerington Mine Site (Revision 4), CSM text revisions and associated information requested by EPA on November 12.
- The following additions have been made to the bottled water program: DW-40, DW-47, DW 104, DW-158, and DW-177.
- The following changes were made to the domestic well program: a signed access agreement was received for a new resident at DW-152, the owners at DW-40, DW-47, DW-104, DW-158, and DW-177 started receiving bottled water; the owners at DW-42 and DW-165 rejected receiving bottled water; the owner at DW-104 is undecided about receiving bottled water; and the owner at DW-168 will receive bottled water once the vacant house is occupied.
- Continued compilation of monitoring data for inclusion in the 3Q Site-wide groundwater monitoring and domestic well monitoring reports.
- Completed the 4Q 2010 Site-wide groundwater monitoring and domestic well monitoring programs November 7 to 19. A total of 102 monitor wells and 66 domestic wells were sampled.
- Continued the 2010 monitor well installation program (see attached progress update). Monitor wells B/W-31D, B/W-42S, B/W-42I, B/W-42D, B/W-46S, B/W-46I, B/W-46D, B/W-62D1, B/W-62D2, B/W-62D4, W4CB-2D3 and W5DB-D2 were installed. Monitor wells B/W-55S, B/W-55I, B/W-55D, B/W-62D2, W5DB-S, W5DB-I, W5DB-D2, W5DB-D3, B/W-30S, B/W-30I, B/W-30D, B/W-31D, B/W-33I, B/W-33D, B/W-33B, B/W-44D2 and B/W-44B were developed.
- Zonal sample results were received for B/W-32, B/W-38R, B/W-46, B/W-60, and B/W-66. A total of 58 aquifer solids samples were collected and shipped to Test America for laboratory analysis as part of the revised Aquifer Solids Work Plan.
- Monthly surface water sampling occurred on December 2.
- Participated in a Site visit with EPA on November 18 to review cores from the groundwater investigations, discuss surface water data collection and assess the potential to conduct a gravity survey north of the Site to assess depth to bedrock (EPA in-house case study).
- Continued the preparation of a technical memorandum that describes analytic modeling and particle tracking of pumpback well capture zones based on the results of the pumpback well aquifer testing program.

November 2010 Activities - Continued

Site Characterization - Continued

- Continued updates to the three-dimensional visualization tool for groundwater conditions associated with the Site to accommodate the 2010 hydrogeologic and geochemical data sets.
- Spectrum Geophysics continued the sub-surface investigation in the Process Areas. Submitted a revised Process Areas geophysical survey technical memorandum on November 18, and provided additional interim geophysical results to EPA on November 29.
- Continued routine database management activities.
- Continued Site wildlife surveys, data management and wildlife observation reports.

AOC Removal Actions

- Continued to compile the data summary report for the geochemical and geotechnical characterization of the mineral salt precipitates and sub-grade materials in the north cell of the PWS evaporation pond.
- Continued work on the three remaining removal actions pursuant to the 2009 AOC and SOW: interim covers for the Thumb Pond and Sub-Area A (the cover for the Thumb Pond was completed); transite pipe removal (all sections and pieces of transite pipe has been collected) with placement in the on-Site landfill and off-Site repository remaining; and the excavation and removal to the off-Site repository of Process Areas radiological soils.
- Continued to maintain and operate continuous PM10 monitors (TEOMs) at Site perimeter stations AM-1 and AM-6 in support of the removal actions (the AM-3 TEOM was repaired by the manufacturer and re-installed on November 18). Operated real-time PM10 and asbestos meters at various removal action work areas.
- Initiated responses to EPA comments to, and continued updates to, the Draft Dust Suppression Plan for the inactive Anaconda Evaporations Ponds dated October 20, 2010.

Planned December 2010/January 2011 Activities

Site Characterization

- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.
- Continue groundwater elevation and pit lake level monitoring. Install a new pit lake pressure transducer. Continue meteorological monitoring at AM-6.
- Submit the 3Q 2010 Site-wide monitoring and domestic well monitoring reports. Initiate data compilation for the 2010 annual Site-wide monitoring and domestic well monitoring reports.
- Continue and complete borehole drilling, zonal sampling and monitor well installations pursuant to the revised 2010 Monitor Well and Ag Fields Work Plans. Perform well development, slug testing and wellhead surveying activities. Install pressure transducers in new wells identified by EPA. Initiate preparation of a data summary report for all 2010 groundwater investigation activities.
- Continue aquifer solids testing activities pursuant to the revised Work Plan.
- Initiate development of the On-Site Monitor Well Work Plan to be initiated in early 2011.
- Submit a technical memorandum describing analytic modeling/particle tracking for the pumpback wells based on aquifer test results, pursuant to the PWS Characterization Work Plan Addendum.
- Continue compilation of geophysical surveys in the Process Areas, and meet with EPA to discuss the results and next phase of geophysical surveys and related investigations. Meet with EPA to discuss the Process Areas RI Work Plan.

Planned December 2010/January 2011 Activities - Continued

AOC Removal Actions

- Continue routine O&M, site security, and bird deterrent activities.
- Conduct 4Q 2010 sampling of FMS pond fluids and salt precipitates, pursuant to the revised FMS O&M Plan.
- Submit a letter report to EPA that summarizes the geochemical and geotechnical data resulting from the characterization activities for the north cell of the PWS evaporation pond.
- Compile analytical data, once received, resulting from implementation of the revised Cover Materials Work Plan, and initiate preparation of the Data Summary Report.
- Complete removal action activities for the Thumb Pond and Sub-Area A interim covers, Transite Pipe and Process Areas Radiological Soils, and associated monitoring (air quality and VLT screening). Initiate preparation of the Draft Removal Action Reports
- Submit the revised Dust Suppression Plan per EPA comments received on November 2, 2010.
- Submit the updated bird mitigation protocol to USFWS after receiving approval of the changes from EPA.
- Continue to investigate and repair the apparent leak in the VLT pond liner, per EPA direction.

If you have any questions or comments about the November 2010 monthly report, please contact me at (714) 228-6774 or via e-mail at jack.oman@bp.com.

Sincerely,



Jack Oman
Project Manager

cc: Dave Seter, EPA – via electronic mail
Jacquelyn Hayes, EPA – via electronic mail
Svetlana Zenkin, EPA – via electronic mail
Roberta Blank, EPA – via electronic mail
Andrew Helmlinger, EPA – via electronic mail
Tom Dunkelman, EPA – via electronic mail
Joe Sawyer, NDEP – via electronic mail
Tom Olsen, BLM – via electronic mail
Dan Newell, City of Yerington – via electronic mail
Phyllis Hunewill, Lyon County Commissioner – via electronic mail
Richard Faber, Lyon County Facilities Engineering – via electronic mail
Tom Grady, Nevada State Assembly – via electronic mail
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